IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PARKER-HANNIFIN CORPORATION, and PARKER INTANGIBLES, LLC,	:	
Plaintiffs,	:	C.A. No. 06-751-MPT
v.	:	
ZIPPERTUBING (JAPAN), LTD.,	:	
Defendant.	:	

DECLARATION OF MICHAEL H. BUNYAN IN SUPPORT OF PLAINTIFFS' OPPOSITION TO MOTION OF DEFENDANT FOR LEAVE TO FILE AN AMENDED ANSWER TO FIRST AMENDED COMPLAINT

I, Michael H. Bunyan, hereby declare and state as follows:

1. I am a scientist for the Chomerics Division of Parker-Hannifin Corporation ("Parker"). I received a certification in Materials Science and Plastics Engineering from the University of Massachusetts. I have almost 22 years of experience in research and development in the electromagnetic interference ("EMI") shielding industry.

2. I am the inventor of the subject matter described and claimed in U.S. Patent No. 6,410,137 ("the'137 patent").

3. The '137 patent is directed to an intumescent, flame-retardant pressure-sensitive adhesive (PSA) composition particularly adapted for use in foil-over-foam EMI shielding gaskets.

4. The commercial embodiment of the '137 patent is Parker's Soft-Shield® 4000 series of foil-over-foam gaskets.

5. The three-part combination of flame retardants described in the '137 patent is used as an adhesive in Soft-Shield® 4000 to bond the foam core to the foil.

6. The idea of using a three-part combination of flame retardants, including brominated compounds, antimony compounds, and graphite, was first considered for use in a commercial product in July 1998.

7. William I. Flanders and I are co-inventors of the subject matter described and claimed in U.S Patent No. 6,248,393; U.S. Patent No. 6,387,523; U.S. Patent No. 6,521,348; U.S. Patent No. 6,716,536; and U.S. Patent No. 6,777,095 (collectively "the patents-in-suit").

8. Parker's commercial embodiment of the inventions described in the patents-in-suit is Parker's Soft Shield® 5000 series of fabric-over-foam gaskets.

9. The best mode known to the inventors, myself and Mr. Flanders, at the time of filing Provisional Application No. 60/076,370 on February 27, 1998, which led to the patents-in-suit, was to use a modified acrylic latex having a two-part combination of flame retardant additives, namely a brominated compound and an antimony compound (the "two-part combination").

10. The two-part combination coating does not include graphite.

11. As described in the patents-in-suit, the two-part combination originally included decabromodiphenyl oxide and antimony oxide, which were acquired as components of a commercially available emulsion called Heveatex 4129FR. The name of Heveatex 4129FR was changed to Heveatex 4153 when certain viscosity adjustments were made at Parker's request. A material safety data sheet for the emulsion is attached hereto as Exhibit A.

12. The Soft Shield® 5000 series used the two-part combination in the flame retardant coating from its introduction in 1998 until 2006.

13. In 2006, the European Union banned the use of decabromodiphenyl oxide.

14. In response to the ban, Parker made Soft Shield® 5000 for a period of about six months with a single-part flame retardant in the coating, which was graphite.

15. Parker found processing of the graphite-containing coating difficult, and resulted in products that were not aesthetically pleasing and often failed to meet customers' standards.

16. In response to customer complaints, Parker switched to a graphite-free coating having a combination of antimony oxide, zinc borate, and decabromodiphenyl ethane (a halogenated compound that complies with the new European regulation), which is still used today in Soft Shield® 5000.

17. The Soft Shield® 5000 series has never included the three-part combination of the '137 patent in the coating, and still does not use the three-part combination of the '137 patent today.

18. The two-part combination was the best mode known to the inventors at the time each of the applications leading to the patents-in-suit was filed (February 16, 1999 with respect to U.S Patent No. 6,248,393; June 18, 2001 with respect to U.S. Patent No. 6,387,523; May 9, 2002 with respect to U.S. Patent No. 6,521,348; December 11, 2002 with respect to U.S. Patent No. 6,716,536; and January 7, 2004 with respect to U.S. Patent No. 6,777,095).

19. The two-part combination was still considered the best mode for practicing the inventions of the patents-in-suit until very recently.

20. Within the last year, concerns over the use of halogenated compounds have spurred current research into non-halogenated (e.g., non-brominated) flame retardant additives.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct. This Declaration is executed this 2nd day of September, 2008.

Michael H. Bunyan

CERTIFICATE OF SERVICE

I hereby certify that on September 5, 2008, I caused to be electronically filed a true and correct copy of the foregoing document with the Clerk of the Court using CM/ECF, which will send notification that such filing is available for viewing and downloading to counsel of record on the Court's CM/ECF registrants for this case. I further certify that on September 5, 2008 I caused a copy of the foregoing documents to be served upon the following in the manner indicated:

BY E-MAIL AND HAND DELIVERY

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EXHIBIT A

HEVEATEX CORPORATION
106 Ferry Street
Fall River, MA 02722
(508)675-0181
Date revised: Jan. 13, 1998

*** MATERIAL SAFETY ***
*** DATA SHEET ***

I. PRODUCT IDENTIFICATION

IDENTITY(as used on label): **004153**

PRODUCT TYPE: **Acrylic Latex Compound**

II. HAZARDOUS COMPONENTS | OSHA PEL | ACGIH TLV | %

None

* This product contain the following chemicals subject to the reporting requirements of SARA Section 313 and 40CFR Part 372:

Decabromodiphenyl oxide CAS#1163-19-5 25%
Antimony compounds(Category code N010) 12.5%

III. PHYSICAL/CHEMICAL PROPERTIES

Boiling Point: **212 F** Specific gravity(H2O=1): **1.32**

Solubility in water: **Dilutable**

Appearance and odor: **Viscous white liquid - mild acrylate odor**

IV. FIRE AND EXPLOSION HAZARD DATA

Flash point(Method used): **N/A**
UEL: **N/A** LEL: **N/A**

Extinguishing media: **Water fog, CO2, dry chemical, foam.**

Special Fire Fighting Procedures: **Use of SCBA is recommended.**

Unusual Fire and Explosion Hazards: **None known**

V. REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: Will not occur

Incompatibility(Materials to avoid): Avoid contact with strong oxidizing agents.

Hazardous Decomposition or Byproducts: Oxides of carbon and nitrogen from thermal decomposition.

VI. HEALTH HAZARD DATA

Primary routes of Entry: Inhalation? Yes Skin? Yes

Ingestion? Possible

Health Hazards(Acute and Chronic): Prolonged skin contact or direct eye contact may cause mild irritation. Prolonged breathing of heated vapors may cause respiratory irritation.

Carcinogenicity: NTP? No IARC Monographs? No

OSHA Regulated: No

Signs and Symptoms of Exposure: Eye, skin, or respiratory irritation.

Medical Conditions Generally Aggravated by Exposure: None known

Emergency First Aid Procedures: EYES: Flush with water and rinse with USP eyewash. SKIN: Wash with soap and water. INJESTION: Follow with water and consult physician. INHALATION: Remove to fresh air.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

In case of Spillage: Contain spill and soak up with industrial absorbent material.

Waste Disposal Method: Landfill or incinerate in accordance with applicable Federal, State, and Local Regulations.

Storage and Handling: Keep from freezing. Mix well before using. Keep containers properly sealed when not in use. Store under normal room conditions.

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List) H-4129FR

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Acrylic Latex Compound

Section I

Manufacturer's Name: Heveatex Corporation

Address (Number, Street, City, State, and ZIP Code): P.O. Box 2573
106 Ferry Street
Fall River, MA 02722

Emergency Telephone Number: (508)675-0181

Telephone Number for Information: Same

Date Prepared: January 6, 1995

Signature of Preparer (optional):

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
None				

This product contains the following chemicals subject to the reporting requirements of SARA Section 313 and 40 CFR Part 372:
Decabromodiphenyl oxide(CAS#1163-19-5) - 33.7%
Antimony compounds - 6.77%

Section III — Physical/Chemical Characteristics

Boiling Point	212°F	Specific Gravity (H_2O = 1)	1.19
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	As water

Solubility in Water: Dilutable

Appearance and Odor: White liquid - mild acrylate odor

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL	UEL

Extinguishing Media: Water, Foam, CO_2, Dry Chemical

Special Fire Fighting Procedures: Use positive pressure SCBA

Unusual Fire and Explosion Hazards: None known